

> RXA

AIR-WATER CHILLERS AND HEAT PUMPS FOR OUTDOOR INSTALLATION



ADAPTIVE
FUNCTION



Available range

Unit type

- IR Chiller
- IP Heat pump
(reversible on the refrigerant side)

Versions

- VB Base Version
- VP Pump version
- VA Tank version

Acoustic setting up

- AB Base setting up

Unit description

This series of air-water chillers and heat pumps satisfies the cooling and heating requirements of residential plants of small and medium size.

All the units are suitable for outdoor installation and can be applied to fan coil plants, radiant floor plants and high efficiency radiators plants.

The refrigerant circuit, contained in a compartment protected from the air flow to simplify the maintenance operations, is equipped with rotary or scroll compressor (according to the model) mounted on damper supports, brazed plate heat exchanger, thermostatic expansion valve, reverse cycle valve, axial fans with safety protection grilles, finned coil made of

copper pipes and aluminium louvered fins. The circuit is protected by high and low pressure switches and differential pressure switch on the plate heat exchanger.

The plate heat exchanger and all the hydraulic pipes are thermally insulated in order to avoid condensate generation and to reduce thermal losses.

All the units are equipped with variable speed fans control that allows the units to operate with low outdoor temperatures in cooling and high outdoor temperature in heating and permits to reduce noise emissions in such operating conditions.

All the units are supplied with an outdoor temperature sensor, already installed on the unit, in order to realize the climatic control.

All three-phase power supply units are provided with a phase presence and correct sequence controller device.

All the units are accurately built and individually tested in the factory. Only electric and hydraulic connections are required for installation.

Options

Storing and pumping module

- not present (VB - base version)
- standard, high head or modulating pump (VP - pump version)
- tank and standard, high head or modulating pump (VA - tank version)

Integrative electrical heaters

- standard in the flow
(only VB and VP versions)
- standard in the tank
(only VA version)
- upsized in the tank
(only VA version)

Compressor starting

- standard (contactors)
- soft starter

Accessories

- Rubber vibration dampers
- Coil protection grille
- Tank antifreeze electrical heater
- Remote control
- Modbus serial interface on RS485
- Programmer clock
- Phase sequence and voltage controller

NOMINAL performances - Standard plants

IR	Base acoustic setting up (AB)	6.1	7.1	9.1	11.1	14.1	17.1	
A35W7	Cooling capacity	6,24	7,24	9,12	10,6	14,1	16,7	kW
	Power input	2,31	2,81	3,52	4,16	5,25	6,49	kW
	EER	2,70	2,58	2,59	2,55	2,69	2,57	-
	Water flow rate	1074	1246	1573	1836	2437	2883	l/h
	Pressure drops	17	21	31	40	43	39	kPa
	Available static head (standard pump)	54	49	36	24	72	46	kPa
IP	Base acoustic setting up (AB)	6.1	7.1	9.1	11.1	14.1	17.1	
A35W7	Cooling capacity	6,12	7,10	8,95	10,4	13,8	16,4	kW
	Power input	2,31	2,81	3,51	4,15	5,24	6,49	kW
	EER	2,65	2,53	2,55	2,51	2,63	2,53	-
	Water flow rate	1054	1222	1543	1802	2385	2831	l/h
	Pressure drops	16	20	30	39	42	38	kPa
	Available static head (standard pump)	55	49	37	26	77	51	kPa
A7W45	Heating capacity	6,78	7,87	9,95	11,7	15,4	18,2	kW
	Power input	2,22	2,71	3,38	4,01	5,06	6,25	kW
	COP	3,05	2,90	2,94	2,92	3,04	2,91	-
	Water flow rate	1154	1339	1690	1981	2612	3090	l/h
	Pressure drops	18	24	35	45	48	43	kPa
	Available static head (standard pump)	52	46	31	17	57	25	kPa

Data declared according to **EN 14511**. The values are referred to units without options and accessories.

NOMINAL performances - Standard plants - EUROVENT certified data

IR	Base acoustic setting up (AB)	6.1	7.1	9.1	11.1	14.1	17.1	
A35W7	Cooling capacity	6,23	7,45	9,44	10,9	13,9	17,4	kW
	Power input	2,12	2,80	3,66	4,08	5,05	6,54	kW
	EER	2,94	2,66	2,58	2,67	2,75	2,66	-
	ESEER	3,33	3,01	2,92	3,02	3,11	3,01	-
	Pressure drops	28	39	26	34	41	36	kPa
IP	Base acoustic setting up (AB)	6.1	7.1	9.1	11.1	14.1	17.1	
A35W7	Cooling capacity	6,02	7,14	9,24	10,7	13,7	17,2	kW
	Power input	2,13	2,81	3,67	4,08	5,06	6,54	kW
	EER	2,83	2,54	2,52	2,62	2,71	2,63	-
	ESEER	3,21	2,88	2,85	2,97	3,07	2,98	-
	Pressure drops	26	36	25	33	40	35	kPa
A7W45	Heating capacity	6,96	8,14	10,3	11,4	15,2	18,5	kW
	Power input	2,21	2,69	3,60	3,99	4,83	6,27	kW
	COP	3,15	3,03	2,86	2,86	3,15	2,95	-
	Pressure drops	34	45	31	37	48	40	kPa

A35W7 = source : air in 35°C d.b. / plant : water in 12°C out 7°C
 A35W18 = source : air in 35°C d.b. / plant : water in 23°C out 18°C
 A7W45 = source : air in 7°C d.b. 6°C w.b. / plant : water in 40°C out 45°C
 A7W35 = source : air in 7°C d.b. 6°C w.b. / plant : water in 30°C out 35°C

NOMINAL performances - Radiant plants

IR	Base acoustic setting up (AB)	6.1	7.1	9.1	11.1	14.1	17.1	
A35W18	Cooling capacity	7,48	8,67	10,9	12,7	16,8	20,0	kW
	Power input	2,39	2,91	3,64	4,32	5,46	6,75	kW
	EER	3,13	2,98	2,99	2,94	3,08	2,96	-
	Water flow rate	1290	1496	1889	2198	2920	3469	l/h
	Pressure drops	22	29	42	53	58	53	kPa
	Available static head (standard pump)	47	39	22	6	25	-	kPa
IP	Base acoustic setting up (AB)	6.1	7.1	9.1	11.1	14.1	17.1	
A35W18	Cooling capacity	7,34	8,50	10,7	12,5	16,6	19,6	kW
	Power input	2,39	2,91	3,64	4,31	5,45	6,74	kW
	EER	3,07	2,92	2,94	2,90	3,05	2,91	-
	Water flow rate	1266	1467	1855	2164	2868	3400	l/h
	Pressure drops	22	28	41	52	56	51	kPa
	Available static head (standard pump)	48	40	23	8	30	-	kPa
A7W35	Heating capacity	6,92	8,03	10,2	11,9	15,7	18,6	kW
	Power input	1,87	2,28	2,86	3,39	4,27	5,28	kW
	COP	3,70	3,52	3,57	3,51	3,68	3,52	-
	Water flow rate	1183	1371	1731	2023	2674	3171	l/h
	Pressure drops	19	25	36	47	50	46	kPa
	Available static head (standard pump)	51	44	29	15	51	16	kPa

Data declared according to **EN 14511**. The values are referred to units without options and accessories.

Acoustic performances

Base acoustic setting up (AB)	6.1	7.1	9.1	11.1	14.1	17.1	
Sound power level	69	69	72	72	74	74	dB(A)
Sound pressure level at 1 metre	55	55	57	57	59	59	dB(A)
Sound pressure level at 5 metres	44	44	46	46	48	48	dB(A)
Sound pressure level at 10 metres	38	38	41	41	43	43	dB(A)

The acoustic performances are referred to units operating in cooling mode at nominal conditions A35W7.

Unit placed in free field on reflecting surface (directional factor equal to 2).

The sound power level is measured according to ISO 3744 standard.

The sound pressure level is calculated according to ISO 3744 and is referred to a distance of 1/5/10 metres from the external surface of the unit.

OPERATING LIMITS	Unit type	Cooling		Heating		
		min	max	min	max	
Outdoor air inlet temperature	IR, IP	-10	48	-15	42	°C
Water outlet temperature	IR, IP	5	25	30	55	°C

TECHNICAL DATA	6.1	7.1	9.1	11.1	14.1	17.1	
Power supply	230 - 1 - 50	230 - 1 - 50	230 - 1 - 50 400 - 3N - 50	230 - 1 - 50 400 - 3N - 50	400 - 3N - 50	400 - 3N - 50	V-ph-Hz
Compressor type	rotary	rotary	scroll	scroll	scroll	scroll	-
N° compressors / N° refrigerant circuits	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	n°
Plant side heat exchanger type	stainless steel brazed plates	stainless steel brazed plates	stainless steel brazed plates	stainless steel brazed plates	stainless steel brazed plates	stainless steel brazed plates	-
Source side heat exchanger type	finned coil	finned coil	finned coil	finned coil	finned coil	finned coil	-
Fans type	axial	axial	axial	axial	axial	axial	-
N° fans	1	1	1	1	1	1	n°
Tank volume	33	33	50	50	71	71	l
Hydraulic fittings	1" M	1" M	1" M	1" M	1" M	1" M	-

CONTROL SYSTEM

The unit is managed by a microprocessor controller to which, through a wiring board, all the electrical loads and the control devices are connected. The user interface is realized by a display and four buttons that allow to view and, if necessary, modify all the operating parameters of the unit. It's available, as an accessory, a remote control that reports all the functionalities of the user interface placed on the unit.

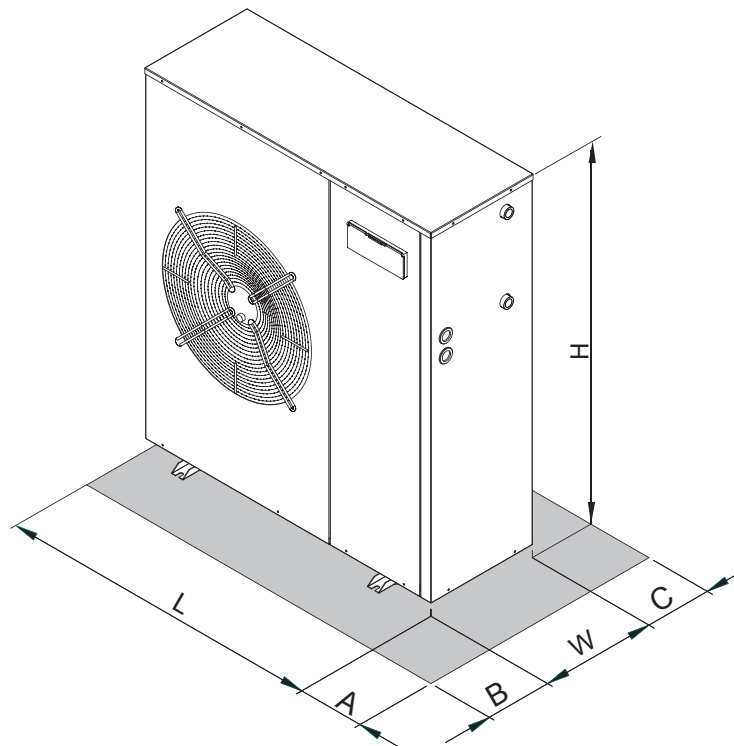
The main functions available are:

- water temperature management (through set point adjustment)
- climatic control in heating and in cooling mode (automatic set point adjustment according to outdoor air temperature)
- dynamic defrost cycle management according to outdoor air temperature
- alarm memory management and diagnostic
- fans management by means of continuous rotational speed control
- pump management

- integrative electrical heaters management in heating mode (2 step logic)
- compressor and pump operating hours recording
- serial communication through Modbus protocol
- remote stand by
- remote cooling-heating
- general alarm digital output



DIMENSIONS AND MINIMUM OPERATING AREA



	Version	6.1	7.1	9.1	11.1	14.1	17.1	
L	VB - VP	994	994	994	994	994	994	mm
	VA	1329	1329	1329	1329	1329	1329	mm
W	-	356	356	356	356	356	356	mm
H	-	903	903	1153	1153	1453	1453	mm
A	-	400	400	400	400	400	400	mm
B	-	600	600	600	600	600	600	mm
C	-	200	200	200	200	200	200	mm